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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,799	11/20/2001	Sheng-Guo Wang		1612

7590 02/14/2005

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EXAMINER	
HOFFMANN, JOHN M	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/989,799	WANG, SHENG-GUO	
	Examiner	Art Unit	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-28 and 30-34* is/are rejected.

7)☐ Claim(s) *29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 29 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can only depend from claims in the alternative. Claim 29 improperly depend from claim 28 **and** 26. See MPEP § 608.01(n). Accordingly, the claim 29 has not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21—25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Examiner could find no support for the newly claimed "geometrical shape parameter" of claim 21, line 2 – either explicit or implicit. This is deemed to be a prima facie showing on failure to comply with the requirement. The burden is now on Applicant to show the requirement is complied with, or to amend the claims so that they comply.

Examiner could not find support for the invention of claim 25: specifically the specific "position" mentioned at lines 2-4 of claim 25.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21: it is unclear what is meant by a "geometrical shape parameter". Examiner is unfamiliar with this term. Examiner could not find this described in the specification – nor in any US Patent. One of ordinary skill would not understand what is meant by this term.

The last 4 lines of claim 21 is not understood as to what is meant that the "process will be...controlled". It is unclear if such is a required step, an intended result, or something else. Other steps are of the "-ing" form: measuring, feeding, providing.... It would seem that since it is not in this "ing" form, that it is not a required step of controlling.

Claim 25, line 8 starts out, "based on...." It is unclear what is based on the measured diameter. Furthermore, line 8 refers to a "perform": it is unclear if this is suppose to be a "preform" or something else.

Claim 24, lines 7-10 is not understood. Line 7 starts out referring to "two different measurement sets" then lists the "one" and "another". But then deviations and nominal values are mentioned. Examiner is unclear how to interpret this – are only the first two require? All 4? The first one and then one of the last three?

The term "bare fiber" (claims 26- 29, 32-34) is indefinite as to its meaning. First it is noted that in paragraph 0003 of the present specification (page 5) it is stated that "the optical fiber which has just left the furnace and is remaining intact is called "bare fiber". The Patent Office determines that this is what applicant is defining the term "bare fiber to be". When reading the specification as a whole, it is noted that there is one device that measures the diameter when the fiber that has "just left the furnace". And the other device is ***well after*** the fiber has left the furnace (see applicant's drawings). Further more, the fiber when it just left the furnace, it would not typically be "intact" because it is still shrinking. In other words, looking at applicant's figure 2, at location 30, the fiber is not a bare fiber, because it has not "just left" the furnace, and at location 20 it is not a "bare fiber" because it is not intact (because it is still shrinking). Therefore, it seems that applicant's fiber is NEVER a "bare fiber" as per the definition that Applicant is using. One of ordinary skill would never be certain as to how to interpret this term and determine whether a particular fiber location is a "bare fiber" location.

Claim 34 there is no antecedent basis for "the current measurements" and this is not understood, because the preceding claims clearly imply that the control is based on fluctuations (i.e. deviations) in the present/current measurements. One would not understand if this is some other data, or if it improper double inclusion or what.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-23 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yoshimura 5073179.

Figure 2 of Yoshimura clearly represents the feeding, heating, melting, the control system that compares the deviations between the actual fiber and the preset (i.e. nominal) diameter. As to the step of measuring the preform , see col. 4, line 41: Since it is known that the preform had a diameter of 25 mm – it is clear that it was measured.

As to the process being "robust". The process is deemed to be sufficiently robust enough to make a fiber (or for Yoshimura's purpose, or to desire to get a patent for it.) The claim does not specify the degree of robustness.

Claims 22-23 is clearly met.

Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Urruti 5551967.

See figure 5, col. 2, lines 19-31, and col 4, lines 32-65 and col. 5, lines 8-20.

As to the bare fiber being measured at two locations: this limitation is met as per the definition used by applicant on page 5 (paragraph 0003) of the specification. At both locations the fiber has "just left" the furnace – for example within one to 5 minutes time. And at both locations the fiber is "intact" because it remain uninjured.

Alternatively, it is deemed that the carbon on the fiber is merely a finish applied to the fiber. And that such results in the "finished bare fiber". See page 11, paragraph 0032 where applicant discusses the "finished bare fiber".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 24- 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura as applied to claim 21 above, and further in view of Yamamura 6220057.

The measuring step : see feature 3 of figure 2 of Yoshimura.

As to the providing step (i.e. providing the control system with the measured outer diameter of the fiber; a nominal preform value and nominal fiber value. All of this providing is clearly depicted in Yoshimura – except for the nominal preform value. However, Yoshimura does disclose that the fiber diameter does depend upon the preform diameter (col. 3, lines 30-34).

Yamamura is cited as showing that one can monitor the preform diameter so as to better the controlling when the diameter of the preform exceeds the preset value (i.e. nominal value). See Yamamura, col. 1, lines 30-53 and col. 2, lines 64-67. It would have been obvious to monitor the Yoshimura preform diameter in the manner taught by Yamamura, for the advantage that Yamamura teaches, and because Yoshimura suggests that preform diameter is a relevant factor during the drawing of glass preforms.

The generating of control signals is clearly met. Again, it is deemed that the combination would be sufficiently robust to be able to produce a useable fiber. The claims do not specify how robust the performance would be.

As to claim 25, the measuring is clearly disclosed. But for the specific location, it is deemed that this limitation does not significantly limit the claim – it does not impart any manipulative difference to the claim. The broadest reasonable interpretation of "predetermined allowable diameter deviation value" encompasses a value that the artisan has in his mind. The claim does not require a step of determining that value, or using that value in any way. Thus 150% would be a predetermine value of which the Yoshimura shrinkage would not be larger then.

The rest of the limitations are clearly met (or discussed above in the discussion of claim 24) – except for the control of the feeding speed. IT would have been obvious to control the feed speed – because if it was randomized, it might feed it too quickly or to slowly. Furthermore, it would have been obvious that the feed speed would have to

be determined –somehow – either manually or automatically. However, the courts have consistently held that it is usually not invention to provide an automatic control means – without some specific control means/method is required by the claims. Presently the claims do not require any specific control.

Alternatively: it is well understood that if one is controlling the output of a process, one has to control the input to a process. If one increase the rate of drawing fiber – one would expect a corresponding change in the rate of input material. For example one cannot feed 1.0 kg/hr of preform into a furnace and expect to withdraw 1.1 kg/hr of fiber nor withdraw 0.9 kg/hr. One can only withdraw exactly 1.0 kg/hr. It would have been obvious to control the feed rate to balance the input and output.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable Urruti 5551967.

This rejection is made in the event that Examiner interpreted the term "bare fiber" incorrectly.

Urruti recognizes the same thing that Applicant does: that at high speeds, the fiber is not completely formed when it leaves the furnace (Col. 2, lines 23-31 and col. 5, lines 8-20). It is clear that this would happen even if there was no hermetic layer applied. It would have been obvious to omit the hermetic coater if no hermetic coating was needed/desired.

From MPEP 2144.04

II. ELIMINATION OF A STEP OR AN ELEMENT AND ITS FUNCTION

A. Omission of an Element and Its Function Is Obvious If the Function of the Element Is Not Desired
Ex parte Wu , 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989) (Claims at issue were directed to a method for inhibiting corrosion on metal surfaces using a composition consisting of epoxy resin, petroleum sulfonate, and hydrocarbon diluent. The claims were rejected over a primary reference which disclosed an anticorrosion composition of epoxy resin, hydrocarbon diluent, and polybasic acid salts wherein said salts were taught to be beneficial when employed in a freshwater environment, in view of secondary references which clearly suggested the addition of petroleum sulfonate to corrosion inhibiting compositions. The Board affirmed the rejection, holding that it would have been obvious to omit the polybasic acid salts of the primary reference where the function attributed to such salt is not desired or required, such as in compositions for providing corrosion resistance in environments which do not encounter fresh water.). See also In re Larson, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious if this feature was not desired.); and In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).

Claim 27: Figure 5 shows the two target diameters. The controller box with "glass feed" represents the feeding speed control. The rest of the limitations are clearly met.

Claims 28 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urruti as applied to claims 26-27 above, and further in view of Yamamura 6220057.

Urruti does not disclose the measuring of the preform. Yamamura is cited as showing that one can monitor the preform diameter so as to better the controlling when the diameter of the preform exceeds the preset value (i.e. nominal value). See Yamamura, col. 1, lines 30-53 and col. 2, lines 64-67. It would have been obvious to monitor the Urruti preform diameter in the manner taught by Yamamura, for the advantage that Yamamura teaches.

As to claim 30: it is essentially the same as the claim 28 – however it does not require the second fiber measurement location. Claim 30 is obvious for substantially the same reason as claim 28: it would have been obvious to measure the preform diameter as taught by Yamamura, for the reasons that Yamamura discloses.

As to claims 31-34: such are obvious for the same reasons claim 28 is obvious.

As to the limitations that refer to the control being "based on" diameters, deviations, etc. Such is inherent. Everything is inherently "based on" everything else. For example the control has to be based on each of the diameters because the amount of mass of the glass is based on the diameter, and the heat capacity is based on the amount of mass, and the temperature would be based on the heat capacity. (a 2 cm diameter preform would have 4 times the mass as a 1 cm preform, and thus would need 4 times the total heat, and ¼ the feed rate. Every parameter essentially is inherently "based on" every other parameter.

As to claim 34: as indicated above, the deviations are the fluctuation data that come from the current measurements. It is deemed that the broadest reasonable interpretation of the claim is that the data is from the group of current measurements and historic data. In the case of Urruti the resultant is that the selected data comes only from current measurements. However, if the claims requires fluctuation data from current measurements as well as fluctuation data from historic data: it would have been obvious to perform routine experimentation to determine the optimal starting parameters for the process. One would not expect to build the machine and program it and have it

work on the first try. One would expect to perform some experimental tests to get it running. These tests would result in history data over a period. And fluctuations/changes in the data would help the artisan determine how to best arrange the process.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

As to the arguments that Urruti has only one measurement between the coater and the draw furnace, see the above rejection which points out how both the Urruti measurements can be considered to be a "bare fiber". Furthermore see the rejection which indicates it would have been obvious to remove the first coater of Urruti if one didn't want the hermetic coating. Most importantly, Urruti discloses the same concept that applicant has: measuring at more than one location to get better control of the diameter controlling process.

Examiner wish also to point out Kenmochi 6178778 which teaches drawing and measuring the diameter at "at least locations". Monitoring the diameter at multiple positions would typically not an invention – because it is merely repeating the same concept.

From MPEP 2144.04

B. Duplication of Parts
In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills

the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

Using the above case law: duplicating a fiber diameter sensor "has no patentable significance" – applicant has not demonstrated any unexpected result. One would expect better control by having more sensors. With any process, the more locations the product is monitored, the better the final product would be.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

2-10-05

John Hoffmann
Primary Examiner
Art Unit 1731

jmh